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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,380	02/12/2002	Dietmar Schuetz	1454.1220	3813

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EXAMINER	
CARTER, AARON W	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,380	SCHUETZ, DIETMAR	
	Examiner	Art Unit	
	Aaron W. Carter	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-9 and 12-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-9 and 12-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to papers filed on May 4, 2005.

Response to Amendment

2. In response to applicant's amendment received on May 4, 2005, all requested changes to the claims have been entered. Claims 10 and 11 have been cancelled.

Response to Arguments

3. Applicant's arguments filed May 4, 2005 have been fully considered but they are not persuasive.

Applicants argue that the prior art combination of Tartagni and Sato do not teach or fairly suggest "electronically evaluating a capacitive disturbance of the outer surface of at least one individual sensor caused by said placing to detect at least one of the position and surface structure of a single electronic component". Applicants also argue that a wafer is not an electric component.

Examiner disagrees, as pointed out in the previous rejection, the prior art of Tartagni discloses electronically evaluating a capacitive disturbance of the outer surface of at least one individual sensor caused by said placing (column 4, lines 24-33), wherein the object maybe an object including those made of solid, liquid, gas and plasma (column 2, lines 44-47 and column 3, lines 15-24). The prior art of Sato teaches us a method of detecting at least one of the position and surface structure of a mechanical workpiece using a capacitive sensor (column 4, lines 38-40

and column 10, lines 2-10), wherein the workpiece is a wafer (column 4, lines 38-40 and column 10, lines 2-10). The wafer contains on it an integrated circuit, thus in the broadest reasonable interpretation of the claims corresponds to a single electric component. The combination of Tartagni and Sato is a proper combination because Tartagni discuss that the capacitance sensor of their invention maybe used for evaluating the outer surface of an object made up of any type of matter and Sato teach us that there is a need to evaluate the outer surface of a single electric component, such as the wafer containing an IC.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 7-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tartagni in view of USPN 4,929,893 to Sato et al. ("Sato").

As to claim 7, Tartagni discloses a method for detecting at least one of position and surface structure of an object, comprising:

Placing the object immediately above an array of capacitive sensors (column 1, line 64 – column 2, line 2, Fig. 1 and 2), each having an outer surface (Fig. 1, 2 and 3 wherein the outer surface of the sensor is separated from the object by an insulating surface element 25) with a

lateral extent of at most half of a lateral extent of the object (column 7, lines 53-57, column 8, lines 41-45 and column 10, lines 10-19); and

Electronically evaluating a capacitive disturbance of the outer surface of at least one individual sensor caused by said placing, to detect at least one of a position and surface structure of an object (column 4, lines 24-33), wherein the object may include those made of solid, liquid, gas and plasma (column 2, lines 44-47 and column 3, lines 15-24).

Tartagni does not disclose expressly that the object is a single electric component.

However Sato discloses a method of detecting at least one of the position and surface structure of a single electric component using a capacitive sensor (column 4, lines 38-40 and column 10, lines 2-10, wherein the wafer contains an integrated circuit which corresponds to a single electric component).

Tartagni & Sato are combinable because they are from the same field of image processing and analysis and more specifically images provided using a capacitive sensor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the capacitive sensor provide by Tartagni for detecting the position or surface structure of a single electric component as disclosed by Sato.

The suggestion/motivation for doing so would have been to provide stable automatic probe card alignment (column 1, lines 49-60) by measuring the outer configuration of the wafer using a capacitance sensor (column 4, lines 38-40 and column 10, lines 2-10).

Therefore, it would have been obvious to combine Tartagni with Sato to obtain the invention as specified in claim 7.

As to claim 8, the combination of Tartagni and Sato discloses the method as claimed in claim 7, further comprising forming an image of the object (Tartagni, column 4, lines 34-38 and Fig. 7).

As to claim 9, the combination of Tartagni and Sato discloses the method as claimed in claim 8, wherein the array is a capacitive fingerprint sensor formed of a semiconductor (column 3, lines 15-24 and column 4, lines 13-15).

As to claim 12, the combination of Tartagni and Sato disclose the method as claimed in claim 7, wherein said evaluating detects at least one of the position and surface structure of terminal pins of the electrical component (Sato, column 12, line 54 – column 13, line 4, wherein the bonding pads of the IC correspond to the terminal pins).

As to claim 13, the combination of Tartagni and Sato disclose the method as claimed in claim 12,

Wherein said evaluating detects the position and the orientation of the terminal pins of the electric component in an automatic component mounting machine (Sato, column 12, line 54 – column 13, line 4) that has a machine tool (Fig. 1, the entire apparatus corresponds to a machine tool) and a component provider (Fig. 10, element 105, wherein the wafer is loaded on the chuck), and

Wherein the array is integrated in at least one of the component provider and the machine tool (column 4, lines 38-40 and Fig. 1, element 4).

As to claim 14, please refer to the rejections made for claims 7, 9 and 13 above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445. The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AWC

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